International Civil Aviation Organization

WORKING PAPER

DGP-WG/05-WP/1
1/3/05

DANGEROUS GOODS PANEL (DGP)

MEETING OF THE WORKING GROUP OF THE WHOLE

Montreal, 18 to 22 April 2005

REPORT OF THE MEETING OF THE WORKING GROUP OF THE WHOLE WG/04 (Abu Dhabi, 4 to 8 October 2004)

(Presented by the Secretary)

1. INTRODUCTION

1.1 The meeting of the Working Group of the Whole Dangerous Goods Panel was opened by Mr. Khalifa Abu Jamhoor, Director of Administration and Finance, General Civil Aviation Authority, United Arab Emirates on 4 October 2004. Mrs. J. Code was elected Chairperson of the meeting and Mr. G. Leach was elected Vice Chairperson. Mrs. Code, on behalf of the working group, thanked Mr. Khalifa for the hospitality provided by the UAE GCAA and assured him that the deliberations of the meeting could only benefit from the remarkable surroundings.

1.2 Following the introductions, the Chairperson noted that Mr. Busacker, the member nominated by Germany had retired and that Mr. Brockhaus was now the new member. The participants of the working group wished to extend their thanks to Mr. Busacker for the contributions he made to the panel over an extended period of time and to wish him all the best in his retirement. They also welcomed Mr. Brockhaus as the new member.

1.3 All panel members present agreed the absence of the Secretary during this meeting was both unfortunate and unhelpful to the work of the group and they indicated their wish that it did not occur again.

2. ATTENDANCE

2.1 The meeting was attended by the following panel members and advisers:

Member/Observer*	Adviser	State/International Organization
P. Steele	L. Willoughby	Australia
M. Hinoul		Belgium

Member/Observer*	Adviser	State/International Organization
J. Code	D. Sylvestre D. McInnes	Canada
E. Chim* C. Pang*		China
J. Le Tonqueze		France
H. Brockhaus	R. Auschra P. Blumel M. Philippi T. Ezel	Germany
A. Ventresca	M. Apolloni A. Furia	Italy
	K. Tateyama Y. Watanabe	Japan
D. Raadgers	S. Hassing S. Oosterhoff	Kingdom of the Netherlands
M. Evans		New Zealand
O.S. Al-Ameri	L. Armen	United Arab Emirates
G. Leach	R. Wells M. Castle J. Hart	United Kingdom
R. Richard	J. McLaughlin	United States
J. Abouchaar	P. Oppenheimer P. Balasubramanian	IATA
W. Schuurman	M. Rogers A. van den Huddingh	IFALPA
N. Previsani*		WHO
M. Wangler*		IAEA
	A. McCulloch	IECC
	E. Sigrist	CEFIC

3. DEVELOPMENT OF PROPOSALS, IF NECESSARY, FOR AMENDMENTS TO ANNEX 18 — THE SAFE TRANSPORT OF DANGEROUS GOODS BY AIR

3.1 Notification of Operator Variations by States (DGP WG/04 WP/17)

3.1.1 Clarification was sought from the secretariat as to what ICAO considers the responsibilities of States to be in relation to submission of operator variations. A member noted that States cannot monitor operator variations; operators can make any business decision they choose above the minimum regulatory requirement. It was questioned whether the requirements are enforceable and if not, should they be in the ICAO Technical Instructions. Subject to receiving guidance from the secretariat, the proposer said another paper would be submitted to WG/05.

4. DEVELOPMENT OF RECOMMENDATIONS FOR AMENDMENTS TO THE TECHNICAL INSTRUCTIONS FOR INCORPORATION IN THE 2007/2008 EDITION

Infectious Substances

4.1 ICAO PI 602 vs. UN PI 620 (DGP WG/04 WP/2)

4.1.1 A possible contradiction regarding the 95 kPa pressure differential test contained in the UN packing instruction 620 with that in the ICAO packing instruction 602 was discussed. It was agreed that the text in both packing instructions should be harmonized. However, it became evident the text in both the UN and the ICAO TIs was open to interpretation and this may be due to the lack of test protocols.

4.1.2 One member indicated the current practice used in their country is to perform the pressure differential test on the package at ambient temperature and separately expose the package to temperatures ranging from -40^{0}C to 55^{0}C and observe for leaks. Another member indicated that the pressure differential test was conducted at -40 ^{0}C and + 55^{0}C.

4.1.3 One member suggested that the following text should be adopted because it clearly separated the temperature and pressure differential requirements which he considered was the intent of the UN text as follows:

> The primary receptacle or secondary packaging used for infectious substances must be capable of withstanding, without leakage, an internal pressure producing a pressure differential of not less than 95 kPa
>
> The primary receptacle or secondary packaging used for infectious substances must be capable of withstanding without leakage temperatures in the range of -40EC to +55EC.

4.1.4 It was decided that members would contact the packaging testing laboratories in their respective countries to determine what the present practice is and examine what the most effective test available is to ensure the safety of the primary receptacle and secondary package. Information obtained from such research could then be submitted to the next meeting.

4.2 **Exclusions in PI 650 (DGP WG/04 WP/33)**

4.2.1 Potential inconsistencies regarding the manner in which dangerous goods accompanying infectious substances assigned to UN 3373 were handled, versus those same dangerous goods when packaged separately, was discussed. These inconsistencies included labeling and training requirements, loading restrictions and the maximum outer packaging limitation.

4.2.2 The working group recognized there is a need to examine:

- the need to better identify the dangerous goods that are typically packed with diagnostic specimens. One panel member provided the following examples; methanol, isopropyl alcohol, boric acid, formaldehyde, formalin, and sodium borate;

- the impact the presence these other dangerous goods will have on the transport of UN 3373 by mail. The Secretary was invited to contact the UPU on this issue to determine their position.

- the application of an upper limit being established for these dangerous goods in any one outer packaging;

- restricting the dangerous goods allowed to PG II and III only.

4.2.3 One person noted that should an additional label be required to reflect the hazard of these other dangerous goods, it could lead to extensive confusion on the part of the acceptance staff who may use its presence as an indication that a dangerous goods transport document should be present.

4.2.4 Training was thought to be too stringent to impose on those shippers who ship their samples or specimens from home.

4.2.5 One panel member indicated that neither the UN Recommendations nor the TI provide this provision for infectious substances of UN 2814 and UN 2900 in P602/620.

4.2.6 No proposals were offered in this paper.

4.3 **Proposed Amendment to Division 6.2 (DGP WG/04 WP/38)**

4.3.1 Before discussion of a proposed amendment to WP/38, two information papers were provided to the working group. **DGP-WG/04-IP/03** provided a sample of an IFALPA safety bulletin issued in June 2004 advising on the safe transport of UN 3373. One member expressed concern about the somewhat alarmist text that has been used in the bulletin. It was suggested that the ICAO DGP should consider the publication of a Guidance Document which would clarify the ICAO TI provisions relating to the transport of UN 3373. There was some support for this suggestion. One member expressed a concern pilots working on board smaller aircraft would be aware of the presence of UN 3373 and should therefore be provided with emergency response related information. The second information paper (**DGP-WG/04-IP/04**) was provided for panel members so that they could be familiar with the work related to infectious substances which is being proposed to the UN.

4.3.2 Some members expressed a concern about the potential for multimodal disharmony should ICAO adopt, as proposed in WP/38 by means of an Addendum, certain of the proposed changes to the infectious substance requirements currently being considered by the UN. However, the majority of the

members agreed in principle to support the incorporation of specific amendments to the UN Model Regulations 14th Edition into the 2005/2006 ICAO TIs through the issuance of an Addendum.

4.3.3 The Secretary was asked to advise the ANC the text presented in Appendix A has been agreed to in principle, but is dependent on the decisions made by the UNSCOE during their December meeting. The Secretary was also asked to communicate the panel's intention to issue an addendum and the amendments that will be included to the UN by way of an Information Paper. One member volunteered to coordinate the drafting of the Paper prior to the end of the meeting.

4.3.4 A further modification to include references in the proposed addendum to **Diagnostic specimens**, **Clinical specimens** and **Biological substance, Category B** was agreed. It was also agreed to include a note to inform users of the TI that the names **Diagnostic specimens** and **Clinical specimens** will be removed in the 2007-2008 TI. It was further agreed it would be user-friendly to put cross references in the 2007/2008 edition for diagnostic and clinical specimens to refer users to **Biological substance, Category B**.

4.3.5 On the basis of a request from the representative from the World Health Organization (WHO) it was agreed that the exceptions for dried blood spots and fecal occult blood screening tests should be included in the addendum.

4.3.6 A panel member noted that the UNCOE has agreed to delete SP319 which appears in ICAO as SP141 against UN3373. He proposed SP141 should be added in the changes to the ICAO addendum. This was agreed by the panel.

4.3.7 Members were queried as to their position on a UN working paper (ST/SG/AC.10/C.3/2004/94), submitted by the Netherlands, which proposed to authorize either a rigid outer packaging or a rigid secondary packaging. The majority of the panel members did not support this although two members indicated their states would be supporting the proposal at UNSCOE. The Secretary was requested to submit a paper opposing this proposal.

Part 1 — General

4.4 Excepted Quantities: packing requirements (DGP WG/04 WP/1)

4.4.1 A proposal to provide specific packing requirements for those gases permitted under the provisions for excepted quantities was discussed. Some members indicated that it would be more user friendly to place any necessary requirements in the excepted quantity section. It was noted that the excepted quantities provisions are used for instruments and articles that contain small amounts of gases and that the requirements in PI203 may not be appropriate.

4.4.2 The proposer withdrew the paper and said he would come back to WG/05 with a new proposal, following consultation with those members who had provided comments.

4.5 Dangerous Goods Packages opened by Customs and other Authorities (DGP WG/04 WP/12)

4.5.1 A new provision in the 2005/2006 edition of the TIs regarding the opening of dangerous goods packages by Customs or other authorities was discussed. The terminology "prior to being loaded on an aircraft" caused concern for some members. It was queried as to when this requirement was applicable.

A number of members were unsure about what is intended by the requirement currently. The following text was agreed:

> "Any package opened during an inspection must be restored to a condition which complies with these instructions by qualified persons."

4.5.2 It was stated that DGP/19 report had reflected a request for the secretariat to contact the World Customs Organization advising them of this requirement.

4.5.3 Several members were concerned that the requirement for an acceptance check will not be possible for the operator. Some panel members were concerned about the terminology being proposed, so the paper will be submitted in the 2005 meeting after further consultation.

4.6 Carbon Dioxide, Solid in Excepted Quantities (DGP WG/04 WP/15)

4.6.1 A proposal to remove dry ice from the excepted quantities provisions of 1;2.4.2.2 was agreed. It was noted that the provisions for dry ice in P904 provided sufficient guidance for the shipper. It was noted dry ice is not currently allowed in limited quantities and appropriate criteria for packaging under the excepted quantities provisions is not provided. It was further agreed to add an exclusion for dry ice as in 1;2.4.2.

4.7 Dangerous Goods Placed on Board to Provide, During Flight, Medical Aid to a Patient (DGP WG/04 WP/21)

4.7.1 Clarification was sought regarding the conditions under which dangerous goods used to provide medical aid for a patient during flight were not subject to the TIs. A number of members stated that the dangerous goods were permitted on board when collecting patients or returning from the patient's destination. Other members disagreed and stated that the patient must be on board for this exception to apply.

4.7.2 It was noted that the provisions for search and rescue operations were open to similar interpretation.

4.7.3 One member suggested a legal opinion regarding the interpretation of this issue be obtained from the ICAO Legal Bureau. It was decided that a working group be formed to evaluate whether conditions should be placed on the before and after elements of the transport.

4.8 Definition on an Overpack (DGP WG/04 WP/34)

4.8.1 Clarification regarding the obligations of agencies such as freight forwarders who routinely consolidate overpacks was sought. It was suggested if overpacks were consolidated, a new overpack was created; however, the definition of overpack referred to a single shipper. It was suggested that a freight forwarder may be acting as an agent of a shipper in which case the shipper is still responsible. If the freight forwarder is not an agent of the shipper and consolidates an overpack he becomes the shipper.

4.8.2 The proposer withdrew the paper and said he would consult further prior to the WG/05 meeting.

4.9 **Dangerous Goods Training (DGP WG/04 WP/40)**

4.9.1 The requirement to issue or retain a hard copy of a training certificate was queried on the basis that many operators and training providers maintain their training records electronically. Several members were concerned about enforcement if the certificate were not available to inspectors. They believed the enforcement of the regulations would be more effective with the certificate as currently required in the TIs. Some members indicated that this is already the case due to operators maintaining various operational locations and some operators training large volumes of workers every two years. Following some suggested language modification, the proposal, as amended, was agreed.

Part 2 — Classification

4.10 **Classification Criteria For Division 6.1 And Class 8 (DGP WG/04 WP/9)**

4.10.1 Apparent deficiencies in the classification criteria for substances in division 6.1 and class 8 were discussed. One panel member explained the intent of the UN Model Regulations was that human experience always takes precedence over animal test data but this caused problems in enforcement, as the requirements were too subjective and it was not clear from where information relating to human experience could be obtained. It was noted that the UN Model Regulations state how the test results lead to the assignment of packing groups but it was not clear on how to assign packing groups on the basis of human experience.

4.10.2 Members were asked to discuss the issue with their respective UN members and a paper will be submitted to the WG/05 meeting. It was suggested that, depending on the outcome of the discussion, the Secretary might then be asked to go to the UN and GHS to propose changes.

Part 3 — Dangerous Goods List and Limited Quantities Exceptions

4.11 **Editorial (DGP WG/04 WP/5)**

4.11.1 Two editorial decisions were taken after a brief discussion. It was agreed that the reference to packing instruction Y416 for Hafnium powder, dry will be revised to 416 and that where the word “inhibited” is used with the proper shipping name for UN1085 and UN3079 it would be changed to “stabilized”. (See also Agenda Item 5).

4.12 **ICAO Technical Instructions Part 3, Chapter 3 Special Provision A97 (DGP WG/04 WP/7)**

4.12.1 Difficulties encountered by industry with the designation of **Environmentally hazardous substances** were explained. A proposal to amend special provision A97 by removing the designation of such substances by appropriate national authorities was presented.

4.12.2 One member suggested changes would soon come from the UN regarding UN3082 and UN3077. However, another member stated that the UN was continuing to discuss **Environmentally hazardous substances** but the discussions and decisions would not change whether a substance would be assigned to UN3077 or UN3082. Any decision taken now would not change with the current discussion at the UN.

4.12.3 A member stated if differences exist between national regulations and IMO and ICAO, then the shipper should be able to declare the environmentally hazardous substance under any of those criteria. Currently, there are some differences in the classification systems e.g. while the UN has adopted aquatic toxicity criteria for environmentally hazardous substances, there still are differences between regional and national regulations.

4.12.4 One member requested that work be done in developing an international standard for the classification of environmentally hazardous substances.

4.12.5 Since a number of different competent authorities are interpreting A97 in different ways some members felt there was a need to clarify the requirements contained in the special provision at this meeting.

4.12.6 A number of editorial comments were provided. A member stated that the words "This designation" should be changed to "These entries". Another member stated that since 2;9 does not provide specific criteria for environmentally hazardous substances but instead refers to A97 it should refer to the criteria for substances hazardous to the aquatic environment in the UN Recommendations.

4.12.7 The proposer agreed to submit a new proposal at the WG/05 meeting.

4.13 Labelling of Packages Containing Organic Peroxides (DGP WG/04 WP/22)

4.13.1 Problems with the labelling of packages containing organic peroxides were presented. It was explained that although Table 2-7 contained four notes pertaining to labelling requirements for eleven organic peroxides, similar requirements were not displayed in Table 3-1 for these entries, thereby leading to the potential for refusals of shipments by acceptance staff. It was noted that the organic peroxides had been modified in DGP/19 but were omitted in the text. The status of the omissions will be provided by the secretariat at a future date.

4.13.2 One member noted the issue raised was only one part of a larger problem since it referred only to organic peroxides. In 5;4.1.4.1c) it is stated "Any assigned subsidiary hazard class or division number(s) must be entered …. " It was suggested if there was a problem with understanding the requirement, then a paper should be submitted to the UN to change that requirement.

4.13.3 Although it was recognized that the recognition of the subsidiary classification requirements by acceptance staff posed some difficulty, it was suggested that the presenter of the working paper confer with IATA, putting forward a working paper on a parallel issue for the December 2004 UN meeting to determine if this issue could resolved at the UN.

4.13.4 There was agreement in principal. However, after further discussion it was decided since it is a broader issue that IATA possibly would raise the issue with the UN. All members of the panel were encouraged to discuss this with their UN member. The paper was withdrawn.

4.14 Dry Ice Contained in A Unit Load Device (DGP WG/04 WP/24)

4.14.1 Problems relating to the carriage of dry ice when contained loose in a unit load device (ULD) were discussed. During the discussion on this paper, one member noted that this proposal addressed dry ice offered by a shipper; he suggested there are instances when operators load dry ice in ULDs and that the proposal should be extended to include them.

4.14.2 Initially it was questioned why the quantity limitations were being removed, but the objection was withdrawn after it was explained that currently an operator could load a ULD with packages of dry ice with 200kg per package. Several members stated since the dry ice would not alwaysbe required to be packaged, it would not be restrained and that the ULD would become the package. The working group was informed that it is current practice to place unpackaged dry ice in ULDs with non-dangerous goods such as fish or meat. It was stated that ULDs are not airtight and are therefore vented containers; they would be required to be marked and labeled with the same requirements as an outer package and to be included in the notification to the pilot-in-command.

4.14.3 There was agreement in principle and following some editorial amendment, the proposal was agreed.

4.14.4 One member stated that he would submit a proposal for the WG/05 meeting to address the need to apply a ULD tag.

4.15 UN 3166 — Engines, Internal Combustion (DGP WG/04 WP/25)

4.15.1 The difficulties faced by operators in trying to differentiate between **Engines, internal combustion** (flammable gas powered) and **Engines, internal combustion** (flammable liquid powered) were presented; this was on the basis that the former were not permitted on passenger aircraft whilst the latter were so permitted.

4.15.2 The first proposal was to extend the proper shipping name to include all the light type. One member initially objected stating it would cause multi-modal disharmony; however after a clarification that these items are only regarded as dangerous goods in air transport the objection was withdrawn. It was determined, however, that this would not cause multimodal disharmony as the additional text that would be required on the document is allowed by the UN and other modal regulations.

4.15.3 One member noted that the shipper would need to know what mode of transportation the shipment would be transported by when preparing it for transport. It was further pointed out that the proposed text was included in the TIs when shipping vehicles but not when shipping engines. This would appear to be inconsistent. It was noted that the IMDG code and RID/ADR do not contain an entry for engines, just for vehicles.

4.15.4 With regard to the second proposal which suggested a review of the prohibition of flammable gas powered engines on passenger aircraft, two members believed that the dangers presented by such engines were less than those presented by flammable liquid powered engines. Several members indicated they were not prepared to consider permitting flammable gas powered engines on passenger aircraft without performing some consultation and research.

4.15.5 The first proposal was agreed and the second was withdrawn.

4.16 Net Quantity for Gases (DGP WG/04 WP/27)

4.16.1 The problem faced by shippers when trying to meet the requirement to indicate the net mass of a gas contained in a cylinder on the dangerous goods transport document whilst knowing the standard cylinder marking did not indicate such a quantity was discussed. It was proposed the gross mass would be more suitable i.e. the mass of the cylinder as prepared for transport.

4.16.2 One member stated he agreed in principle with the proposal but noted that changing Table 3-1 to "G" for division 2.2 compressed gases would eliminate some gases, such as nitrogen from transport. He went on to indicate that he would like to consult with the gas industry.

4.16.3 Members were encouraged to examine the effects in their own states and to be prepared to discuss their findings at the WG/05 meeting. The working paper was withdrawn at this time.

4.17 **Forbidden Substances (DGP WG/04 WP/30)**

4.17.1 A number of substances were proposed to be forbidden on passenger and cargo aircraft. It was explained that UN 1162 and UN2481 were included because their properties have been found to be the same as other substances in division 6.1, PG I since they emit toxic gas. It was noted that although the UN had not agreed to add these substances to their list of toxic by inhalation, it was suggested it was appropriate they should be forbidden for air transport.

4.17.2 Several members indicated they would like to see the data prior to designating those two substances as forbidden by passenger aircraft. It was agreed to designate all but UN1162 and UN2481 as forbidden.

4.18 **Amendment to Special Provision A70 (DGP WG/04 WP/36)**

4.18.1 This paper was withdrawn but would be presented at WG/05.

4.19 **Harmonization of Special Provision 98 with UN Special Provision 190 (DGP WG/04 WP/37)**

4.19.1 A proposal to remove the 970 kPa pressure limit which is currently specified in A98 was agreed. It was noted that the deletion of the last sentence in the proposal was inadvertent and the sentence should be reinstated. It was recognized that some medical devices are pressurized above 970kpa. It was noted the UN recently decided not to include a pressure limit for aerosols of such small volumetric capacities

4.19.2 Text for the special provision, as amended by the discussion, was agreed.

4.20 **Carbon Dioxide, Solid in Limited Quantities (DGP WG/04 WP/43)**

4.20.1 This paper was agreed to without comment.

Part 4 — Packing Instructions

4.21 **Amendment to Packing Instruction 900 (DGP WG/04 WP/6)**

4.21.1 This paper was withdrawn.

4.22 **ICAO Technical Instructions Part 4, Chapter 3 Packing Instructions 911 (DGP WG/04 WP/8)**

4.22.1 The views of the working group were sought towards allowing the use of certain flexible intermediate bulk containers (IBCs).

4.22.2 Although one member was prepared to discuss the issue further, several other members commented that they did not want IBCs in general and were not convinced they would stand up to the rigours of air transport. It was observed that if a competent authority had a requirement to move specific materials in such a packaging they could always move it by exemption.

4.22.3 There was no immediate interest in adopting IBCs into air transportation.

4.23 **Packagings for Aerosols (DGP WG/04 WP/28)**

4.23.1 Advice was sought regarding the testing requirements and filling limits which should be applied to aerosols contained in outer packagings. One member explained that these requirements do not apply since an aerosol is an article and not a combination package. This was considered sufficient clarification.

4.24 **Amendment to Packing Instructions Y818, 818 & 820 (DGP WG/04 WP/35)**

4.24.1 A proposal to amend Packing Instructions Y818, 818 and 820 was discussed.

4.24.2 It was agreed that the issues raised should be evaluated as part of the Packing Instruction rationalisation exercise and consequently the paper was withdrawn.

4.25 **Packing for Self-Reactive Substances and Division 5.2 (DGP WG/04 WP/42)**

4.25.1 A proposal to delete the requirement restricting the use of certain packaging for self-reactive substances of division 4.1 and substances of division 5.2 was discussed.

4.25.2 One member suggested that the packing instruction rewrite would perhaps be the most appropriate place to take on this change. Another member stated indicating the type of packaging allowed in a packing instruction was preferred and better for the user.

Part 5 — Shipper's Responsibilities

4.26 **"Keep Away From Heat" Statement on Dangerous Goods Transport Document (DGP WG/04 WP/11)**

4.26.1 With the incorporation of a new "Keep away from heat" label in the 2005/2006 edition of the TIs, the need to retain the requirement to have a statement of the transport document was queried.

4.26.2 Several members stated that the person planning the load might not see the package but only see the document. It was suggested the other modes might benefit from adding this statement to the document. Therefore it may be more beneficial to not take the action at this time and do some consultation prior to removal of the requirement.

4.26.3 Another member commented that the label can be used on non dangerous goods so the requirement should not remain. It was noted that the air mode is the only mode that requires the label and statement.

4.26.4 Several members thought that the statement should not be removed until the label has been used for a period of time and determined to be sufficient. Several members noted that possibly the label and statement on the document are not necessary. The deletion of the label is not currently a proposal.

4.26.5 There seem to be two lines of thought as to the use of information on the document and guidance on storage. The requirement for the label may need to be examined further.

4.26.6 This paper was withdrawn and the subject will be researched further.

4.27 **Orientation of Packages in An Overpack (DGP WG/04 WP/13)**

4.27.1 The need to require overpacks containing single packagings containing liquid dangerous goods to bear orientation labels was discussed.

4.27.2 A member stated that they had a concern about the language that labels are completely visible. Another member stated that the UN had recently added a requirement for single packagings to have orientation labels if the packaging was fitted with vents. However, the only vented packagings in air transportation are for dry ice and liquid nitrogen.

4.27.3 All proposals in this paper were agreed.

4.28 **Dangerous Goods Transport Document — Declaration of Quantity (DGP WG/04 WP/16)**

4.28.1 Difficulties in completing the quantity of dangerous goods on both the transport document and on the notification to captain were discussed. For the former, the total quantity of dangerous goods covered by the description of each item of dangerous goods bearing a different proper shipping name was required; for the latter, the net quantity of each package was required.

4.28.2 A member stated that the existing text is UN text. The problem with the UN text is the air mode requires a pilot notification which cannot be produced from the current quantity requirement. The suggestion to take the change to the UN as the problem is mode specific. It was agreed that the UN should be notified of the change if agreed.

4.28.3 Due to the inability to comply with the NOTOC requirements, it was stated that this change would need to be contained in the addendum. Otherwise, the operators would not be able to comply with the requirements for two years.

4.28.4 One member offered the text currently in the IATA DGR as a possible solution. However, this was not part of the original proposal so a new proposal would have to be submitted .A member agreed to submit a working paper at WG/05 on this issue.

4.29 **Application of Labels on Small Packages (DGP WG/04 WP/23)**

This paper was withdrawn.

4.30 **Marking of Overpacks (DGP WG/04 WP/26)**

4.30.1 The requirement to have the words “limited quantity” reproduced on the outside of an overpack was queried in light of the incorporation of the “overpack” marking. A member stated that in the past the overpack had to be marked to indicate “ inner packagings complied with prescribed specifications” to show that UN packagings were contained within. In order to keep the same criteria and maintain consistency, he suggested the ”limited quantity” mark should be kept. However, it was noted the text of 5;1.1j suggested the requirement for such a mark was redundant.

4.30.2 It was agreed that the words “limited quantity” did not need to be reproduced on the overpack.

Part 6 — Packaging Nomenclature, Marking, Requirements and Tests

Part 7 — Operator’s Responsibilities

4.31 **Separation of Class 1 substances and articles (DGP WG/04 WP/3)**

4.31.1 Differing interpretations of the requirements for segregation and separation of explosives of divisions 1.3 C and 1.3 G were discussed. One member stated that it would be of value to research why the compatibility groups were developed originally. They also stated that the text is confusing as the phrases “interaction between them” and “next to each other” would need to be defined before making a decision on what segregation means.

4.31.2 The working group agreed that explosives of different compatibility groups can be stowed on the same aircraft if appropriate segregation is applied. They stated the proposed change was unnecessary. Some members indicated that the proposed text could cause confusion. New proposed text will be provided for the next working group meeting.

4.32 **Segregation between packages (Table 7 1) and Different dangerous goods packed in one package (Part 4;1.1.7) (DGP WG/04 WP/4)**

4.32.1 A proposal to amend Note 3 to Table 7-1 to clarify the loading of different packages containing the same dangerous goods need not be segregated was discussed.

4.32.2 A member stated two materials could have the same UN number yet be incompatible. Two class 8 materials could be incompatible. Another member stated that there are inconsistencies in the regulations regarding storage and segregation. Another member commented that every item that has a technical name must be segregated.

4.32.3 Although there was support for the comments the terminology could not be agreed. A paper will be submitted in the WG/05 meeting for consideration.

4.33 **Provision of Dangerous Goods Information to Passengers (DGP WG/04 WP/14)**

4.33.1 A proposal to clarify the requirements of 7;5.1.2 a) apply only to operators and not to airport operators was discussed.

4.33.2 Several members stated that the electronic check-in process and paperless tickets were presenting an increasing challenge to inform passengers of the regulatory requirements. A member country is conducting a study of passenger education methods and will be providing the information at the 2005 meeting.

4.33.3 Agreement could not be reached on the text of the proposal. A proposal will be submitted to the WG/05 meeting.

4.33.4 A member also requested the operators to assist the panel in providing alternative passenger notification processes for the electronic processes. IATA will discuss this at their next board meeting and provide the panel with information at the 2005 meeting.

4.34 **Separation/Segregation of Explosives (DGP WG/04 WP/29)**

4.34.1 The lack of clear guidance for operators on how explosives of different divisions or compatibility groups may be stored on the same aircraft was discussed.

4.34.2 Several members indicated they would like time to consult with explosive experts in their countries. It was agreed that the information each country developed would be provided to IATA for consolidation and provided at the WG/05 meeting.

4.34.3 A member cautioned the panel to make certain the explosive experts put the information in context. Handling explosives completely packaged does not pose the same risk as handling unpackaged explosives and differentiate between explosive articles and explosive substances.

Part 8 — Provisions Concerning Passengers and Crew

4.35 **Fuel Cell Cartridges (DGP WG/04 WP/31)**

4.35.1 A presentation on two types of fuel cell cartridges (methanol fuel cell cartridges and hydrogen absorbed in metal hydride fuel cell) was provided for the information of the working group. A number of queries were raised and clarifications were provided as given below.

4.35.2 It was agreed that imitation products could be made; it was explained this was the reason why UN tests were suggested as part of the requirements when it was proposed to include them in class 9. Members were encouraged to discuss this with their UN member prior to the December 2004 UN meeting

4.35.3 It was noted that it would be difficult for users to determine whether the fuel cells were full or empty and was dependent on the fuel cell cartridge itself.

4.35.4 It was explained no energy was present unless the cartridge including the metal hydride was installed in equipment; therefore there is no short circuit hazard.

4.35.5 It was explained that the quantity of fuel which would remain in the cartridge would vary depending on use.

4.35.6 It was noted that although it was not the intention to refill the cartridge after use, some metal hydride may be able to be recycled.

4.35.7 Regarding classification, it was noted these cartridges are currently being transported using the Methanol UN1230. When transported in equipment the entry for Dangerous Goods in Machinery or Apparatus, UN3363 is being used. However, a specific entry for fuel cell cartridges will be proposed at the next UN meeting.

5. DEVELOPMENT OF RECOMMENDATIONS FOR AMENDMENTS TO THE SUPPLEMENT TO THE TECHNICAL INSTRUCTIONS FOR INCORPORATION IN THE 2007/2008 EDITION

5.1 Editorial (DGP WG/04 WP/5)

5.2 An editorial correction to the proper shipping names assigned to UN1085 and UN3079 was agreed. (See also Agenda Item 2, paragraph 4.11)

6. AMENDMENTS TO DOC 9481, EMERGENCY RESPONSE GUIDANCE FOR AIRCRAFT INCIDENTS INVOLVING DANGEROUS GOODS

Editorial Note.— No papers were presented

7. DISCUSSION OF MISCELLANEOUS DANGEROUS GOODS ISSUES

7.1 State Variations (DGP WG/04 WP/10)

7.1.1 Differing views on the legal status of state variations contained in attachments in the TIs were discussed. It was noted that references in Annex 18 were not consistent – Standard 2.5.1 refers to variations "for publication in the Technical Instructions". However the Foreword to the Annex refers to these variations as provisions different to those "contained in these Instructions" and are "listed in Attachment 3."

7.1.2 The secretariat is requested to provide a legal interpretation of the binding nature of the state variations.

7.2 Denial of Shipments of Radioactive Material (DGP WG/04 WP/18)

7.2.1 Following a presentation on facilitating the acceptance of medical isotope shipments (DGP-WG/04-IP/5), a discussion of a request by the International Atomic Energy Agency (IAEA) for ICAO to provide feedback and to begin communication with IFALPA, IATA and ATA about the issue of denial of shipments of radioactive material took place. The IAEA believed that the problem is linked to public perception and training rather than to a lack of safety. Accordingly, the IAEA would like to work with ICAO to develop training programs. The IAEA expressed regret that the Secretary was not present as she had been extensively involved in the work done on this issue prior to this meeting.

7.2.2 The WG recognized that medical isotopes were beneficial to the delivery of healthcare and due to the time sensitive nature of the products the air mode is fundamental to ensuring such products can be used upon delivery to a health facility. Consequently widespread denials of such shipments were not in the public interest. The WG further believed that both States and operators should work together to minimize impediments to the expeditious transport of radioactive material, particularly medical isotopes. The WG supported the work being undertaken by the IAEA to address the denial of shipments issue and would review progress on this matter at WG/05.

7.2.3 One member stated his State has extensive experience with radioactive shipments being denied and was concerned about the need for the movement of medical shipments. He noted that operators can make their own standards and national carriers are faced with many questions.

7.2.4 Another member asked for some examples since there has not been any change in the acceptance requirements in their country. They were not aware of any denials.

7.2.5 It was suggested by one member that the problem came down to training and education and suggested this would decrease refusals. Some insight into the cause of some refusals was provided. Some have to do with loading limitations and where the radioactive material can be loaded on the aircraft. Some refusals could be due to loading restrictions caused by the change in the type of aircraft to be used on a flight; the package may not be able to be loaded on the type of equipment then being used e.g. due to the height of the shipment or some other characteristic.

7.2.6 Another member stated it is not always the ICAO regulations but other agency regulations on a local and national level that have cumbersome or costly implications for the air operator. These would apply to shipments because they are moving in or out of airports in their jurisdiction. It was noted that airport fire brigades may place restrictions on what buildings may be used for the temporary storage of radioactive material.

7.2.7 Another member stated the competent authority cannot mandate that the operator carry radioactive material. It was noted that the IMDG Code contains a statement that all shipments in class 7 when in compliance should not be denied on the grounds of safety.

7.2.8 It was suggested that the issue is related to public and political opinion and that a start should be made with developing more public outreach and providing more background on the safety of these shipments.

7.2.9 An operator stated that his company made the business decision to withdraw from carrying radioactive material. Although sympathetic to the problem, the company is a commercial concern - when a product/revenue review was conducted, it was found not to be cost effective e.g. if a license had to be

obtained and storage costs paid for. He also noted were a failure to occur, the cost would be catastrophic when compared to the revenue generated.

7.2.10 One member stated the training for radioactive material is included with the dangerous goods training course and another stated that a simpler training course would be beneficial. They also added, in their country out of 125 carriers only 5 carry radioactive material.

7.2.11 Responding to a query regarding the use of the IFALPA system for communication, the member indicated that this system is not effective for mass communication of information other than safety. He further noted many members do not transport radioactive material.

7.2.12 The working group indicated they were interested in further discussion of this issue and recommended that the IAEA return with a proposal at the WG/05 meeting is installed.

7.3 Dangerous Goods Packed in Limited Quantities (DGP WG/04 WP/19)

7.3.1 The issue of achieving harmonization between the modes for dangerous goods packed in limited and excepted quantities and consumer commodities has been discussed by the UN during this biennium. The UNSCOE requested the modes to review their current requirements so as to assist in this task. The chairperson reviewed the poll of the dangerous goods panel which had requested responses to a series of questions regarding the requirements for limited quantities and consumer commodities prior to the UNSCOE meeting in July 2004. The questions and positions were reviewed prior to beginning the discussion. The panel members ratified the position previously developed through the email poll conducted by the secretariat.

7.3.2 Members stated that the UNSCOE was requesting that the modes should view the system of limited quantities and consumer commodities from a neutral starting point. The IMO position was discussed.

7.3.3 An industry observer stated that industry had insufficient time to research the proposals and to present a position. It is hoped that following consultation, an industry position will be presented at the WG/05 meeting.

7.3.4 It was noted some of the concern regarding the adoption of the excepted quantities provisions into the UN Recommendations was that the current excepted quantities had to meet the criteria of being permitted for transport on a passenger aircraft; this would not be appropriate for other modes. It was pointed out possible alternative criteria are being considered.

7.3.5 A number of members stated that there was no need to start at "ground zero" as air transport did not have a problem with the current system. ICAO only requested a UN number for consumer commodities but the UN had decided to try and change the current system by adjusting it where appropriate to promote intermodal transportation. It was suggested modes would continue to have differences.

7.3.6 Overall, many members expressed their support for the current system, noting that it would be appropriate to examine modal differences, to identify specifically the differences which existed and to offer solutions for multimodal movement of dangerous goods. It was believed a formal work group was not necessary. It was noted the UN will continue to work on this issue; the panel will discuss it again during the WG/05 meeting at which time differences identified by the states can be reviewed.

7.4 **World Convention of the Transport of Dangerous Goods (DGP WG/04 WP/20)**

7.4.1 A UN working paper, proposing the establishment of a world convention on the transport of dangerous goods, which will be discussed at the December 2004 meeting, was raised. A member stated that ICAO works under the Chicago Convention and a world convention is not necessary. The chairman indicated that the ICAO legal bureau had provided a formal interpretation.

7.4.2 It was noted the air mode sometimes has to react very quickly to respond to accidents and incidents, and this would prove very difficult if a world convention were in place because requirements in conventions were not easy to amend in a timely fashion.

7.4.3 A number of members provided comments and there was no support for a world convention. The working group requests the secretariat to provide its views to the UN.

7.5 **Emergency Response (DGP WG/04 WP/32)**

7.5.1 A request from the ICAO Accident Investigation and Prevention Section to review recommendations from the UK Air Accident Investigation Board was considered. Panel members indicated that the current requirements generally were acceptable. They agreed that there may need to be further consideration of electronic tracking of dangerous goods aboard aircraft. The UK member indicated that he was not aware of a specific need to revise the recently amended text in 7.4.6.1.

7.5.2 This paper will be submitted for the WG/05 meeting.

7.6 **Emergency Response Telephone Number (DGP WG/04 WP/41)**

7.6.1 This proposal was agreed.

8. **RESOLUTION, WHERE POSSIBLE, OF THE NON RECURRENT WORK ITEMS IDENTIFIED BY THE COMMISSION OR THE PANEL**

Principles governing the transport of dangerous goods on cargo only aircraft

Reformatting of the packing instructions

8.1 **Packing Instruction Terms of Reference and Comments (DGP WG/04 WP/39)**

8.1.1 A discussion ensued as to whether the proposed revision of the Terms of Reference should be adopted or whether the exercise of reformatting the Packing Instruction should be discontinued. The working group noted that the exercise underway addressed a number of issues including the incorporation of changes made to UN Model Regulations and rationalization of quantities found in the packing instructions. It was agreed that the exercise should continue under the revised Terms of Reference proposed in this paper.

8.1.2 It was also noted that, given the concerns of many members regarding the separation of packing instructions for cargo aircraft from those for passenger aircraft, the sub-working group would separate the affected packing instructions in the current draft.

8.1.3 A member of the Sub-working Group indicated he would work to provide a revised draft of the packing instructions for the DGP WG/05 meeting. The members agreed that during that meeting they would review the draft and discuss how its transition into regulatory text could be effected.

8.1.4 An information paper (DGP-WG/04-IP7) providing historic information on the assignment of Packing Instruction numbers was provided for information only.

Review of provisions for dangerous goods carried by passengers and crew

General Information

DGP-WG/04-IP/8 PASSENGER EXCEPTIONS

This paper provided information on incidents involving aerosols and a technical report that described the implications if an aerosol were involved in a fire within in a Class C or Class D cargo compartment.

DGP-WG/04-IP/9 INCIDENTS INVOLVING BATTERIES

A member stated that there had been a number of incidents in his State involving batteries. He provided a summary of approximately 40 incidents. He also indicated that a recent incident had involved a lithium ion battery that resulted in a fire and destruction of a cargo aircraft unit load device during loading onto an aircraft. The paper also referenced a recent study (June 2004) that was conducted by the US DOT that found that cargo compartment halon fire suppression systems were not effective in extinguishing fires involving primary (non-rechargeable) lithium batteries. He indicated that other reports showed that secondary (lithium-ion) batteries presented similar hazards. He stated that the purpose of his paper was to inform Panel members of the incidents in his State, request that other Panel members provide data on incidents in their respective States and to initiate discussions on potential actions that could be taken to prevent future incidents. One panel advisor stated that in their experience, types of packaging have a significant impact on the various incidents that have occurred. Further testing (involving individually packaged or more comprehensive packaging) should be conducted by FAA.

DGP-WG/04-IP/10

This paper provided a copy of the proposal that was submitted by the Netherlands to the 26th session of the UN Sub-Committee on the Transport of Dangerous Goods concerning compatibility testing. One member inquired why the paper did not address the proposal that the Netherlands had submitted previously to the DGP expanding the general requirements for the compatibility of dangerous goods with their packagings.

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